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THE FLORA AND AVIFAUNA OF THE PROPOSED CARNARVON RANGE CONSERVATION PARK, WESTERN AUSTRALIA, INCLUDING THE NEARBY BLUE HILL PASTORAL LEASE

PART 1 - BACKGROUND AND INTRODUCTION

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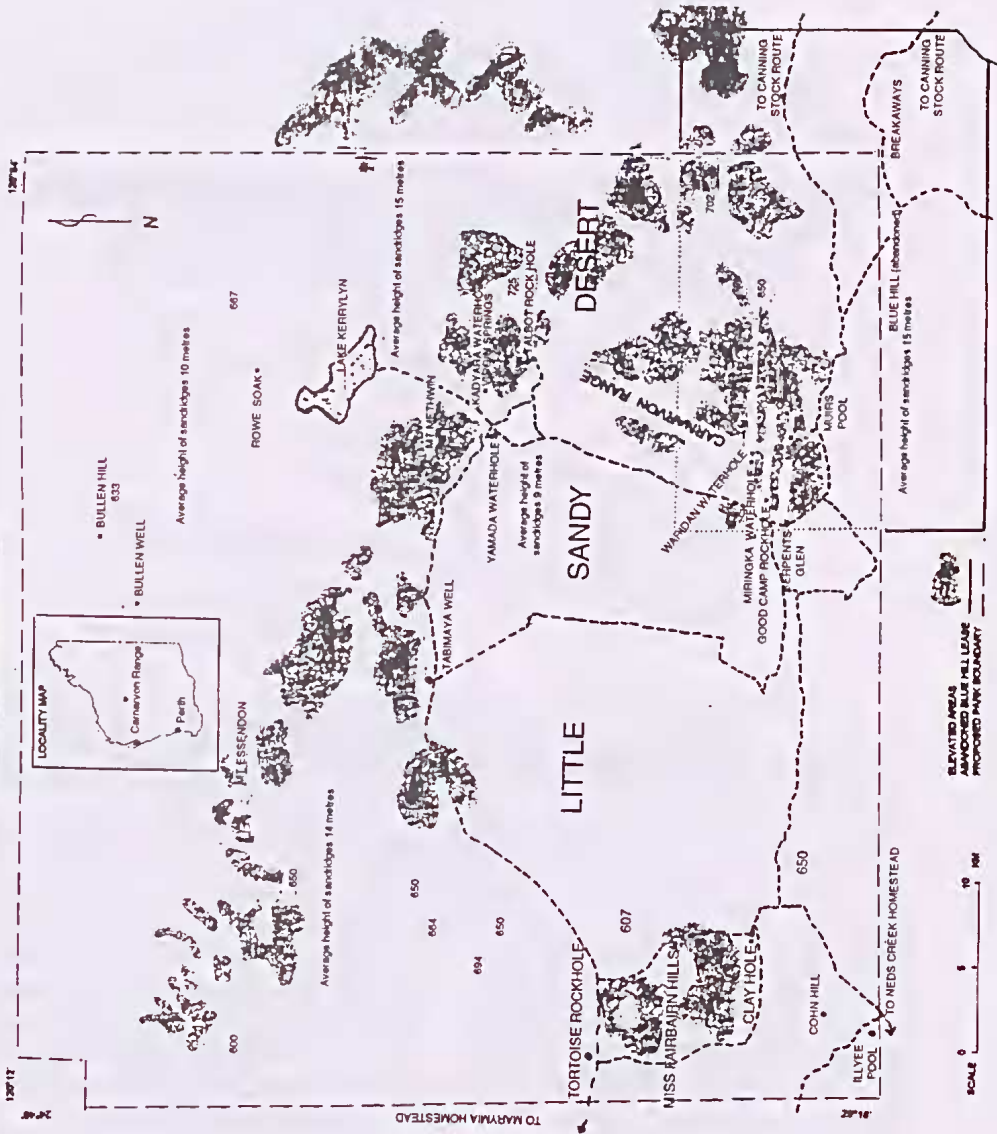
INTRODUCTION

The Carnarvon Range lies in the southwestern portion of the Little Sandy Desert and within the Bangemall Basin, a pre-Cambrian sedimentary basin of the Western Shield situated between the Great Northern Highway and the Canning Stock Route. It runs in a broad band from Mt Essendon (914m elevation) the highest point in the northwest, to Mt Methwin (903m) and south to M6 (See Map 1).

The proposed Carnarvon Range Conservation Park, comprising of 391 000ha was suggested as a nature reserve by the Conservation Through Reserves Committee in 1974. The proposal

was supported by the Environmental Protection Authority in 1975 (EPA 1975) and endorsed by Cabinet in 1976. Its status was later raised to Conservation Park and it is on the register of the National Estate. In 1999, the Western Australian Naturalists' Club made a submission to the then Minister of the Environment, Mrs Cheryl Edwardes, to have the abandoned Blue Hill Pastoral Lease included in the proposed Carnarvon Range Conservation Park. The Club was advised that under current native title claims, inclusion would only be possible under a co-operative management arrangement such as joint reserve management or an Indigenous Protected Area.

PROPOSED CARNARVON RANGE CONSERVATION PARK
& ABANDONED BLUE HILL LEASE



MAP 1. The Carnarvon Range area showing the proposed Carnarvon Range Conservation Park and location of places mentioned in text.



1. Wonyulgunna Sandstone near Good Camp Roekhole at the southern section of the Carnarvon Range, August 2001. Photo: Kevin Coate.



2. Western Australian Naturalists' Club members amidst stands of flowering *Grevillea eriostachys* in typical sandplain near M 6, August 1999. Photo: Kevin Coate.



3. Members of the August 1999 Western Australian Naturalists' Club long range excursion at Serpents Glen in the Carnarvon Range. Photo: Kevin Coate.



4. Breakaway country on the abandoned Blue Hill Pastoral Lease, 1998. Photo: Kevin Coate.

The geology consists of cross-bedded red sandstone (named Wonyulgunna sandstone – after a hill south-east of Kumarina) of middle to upper Proterozoic age (Photo 1). This sandstone takes the form of low, gently undulating hills, with occasional steep cliffs and gullies containing a few semi-permanent pools. Red sand ridges and plains (Photo 2) occur at the base of the hills. Lake Kerrylyn is the only major salt lake in the area and was named in 1976 after a local resident. Also in the southwest of the proposed park are the Miss Fairbairn Hills. They are banded ironstone, low, rounded and undulating – the only occurrence of this geological formation in the area. There are two areas of granitoid rocks, which have eroded into lateritic breakaway country. Soils have been mapped at 1:2000,000 by Northcote *et al.* (1968).

The climate of the region has been described by Beard (1990) as arid, hot and dry with erratic summer rainfall, with an annual precipitation of about 200–250mm, mainly dependent on cyclones.

The park is traditionally home to the Wardal Aborigines, who have relocated to Wiluna. They still retain strong ties to the area. European impact has come from mining exploration and grazing of stock. As seen on Map 1, pastoral leases exist on the western, southwestern and southern boundaries. Mining exploration currently exists in the area. There are three granted “Exploration Licenses” and three in application. These cover approximately 10% of

the proposed park (at February 2002). Historically much of the area has been explored for iron ore. A large part of the central area has been explored for diamonds. Although some indicator minerals were found, exploration failed to upgrade any prospects and most of the licences of this area have lapsed. The southwest area is being explored for lead and base metals in similar geology to that of exploration success further south on Nabberu. The northwest area is being explored for gold on extensions of geology from Marymia Station to the west. The central eastern area is probably being explored for diamonds, but may also be prospective for base metals. Sand cover and transported sediments make exploration difficult and expensive. Exploration activity is not considered very strong and none of the companies have made any announcements of significant success.

HISTORICAL

Prior to the coming of the European, Aborigines lived in the Carnarvon Range area as evidenced by the numerous art sites and artifacts found scattered throughout.

Europeans first explored the area in 1874, when John Forrest named the range after Lord Carnarvon, 4th Earl and Secretary of State for the Colonies.

In 1893, Surveyor May undertook an extensive trigometric survey through the region. There is a series of ‘M’ trigs through the Carnarvon Range attributed to

him – east to Mt Cecil Rhodes (outside the proposed park), north to Mt Essendon and south to M6. Good Camp Rockhole was possibly the rockhole located at traverse point “M10” by him in August 1893, and subsequently named in 1967 by government dogger, P Muir.

In 1895, Surveyor A. Newman carried out a traverse connection to M6.

The explorer Frank Hann visited the area in 1902 and named the Miss Fairbairn Hills, in honour of the daughter of the Resident Magistrate of Fremantle, and Cohn Hill in the southwest section of the proposed park after his riding horse.

Between 1907 and 1909, topographical surveyor H.W.B. Talbot carried out a geological assessment through the Carnarvon Range and the Miss Fairbairn Hills area, while on a geological survey in the country between Wiluna, Halls Creek and Tanami.

Until the 1960's there were few European visits apart from occasional explorers, prospectors, kangaroo shooters and doggers. During the latter part of the 1960's, P. Muir, under instruction from the Agriculture Protection Board, carried out dingo surveys naming and marking water points. Talbot Rockhole and Serpents Glen, although recognised as features, are not officially recorded in the Department of Land Administrations Geonoma database of 2000. These sites would also undoubtedly have an Aboriginal name.

In 1970, the geology master at Hale College, Mark de Graaf, had occasion to lead a party to the area for the purpose of studying geology. As a result of this excursion, a number of locally used names were discovered and recorded – including Tabimaya Well and Kadyara Waterhole.

During 1971–1972 tracks were established through the area by the Wiluna Shire, to facilitate mineral exploration by BHP (P. Strugnell, former Shire Clerk at Wiluna – *pers comm*).

A biological survey was undertaken by the Western Australian Wildlife Research Centre in November 1975 and March 1976 (McKenzie and Burbidge 1979). As part of the latter survey R.E. Johnstone from the Western Australian Museum visited the area from the 28–31 March 1976 (Johnstone *et al.* 1979). Since then periodic visits have been made to the area by Conservation and Land Management personnel. In September 1995 the Australian Nature Conservation Authority involving A.A. Burbidge, S. van Leeuwen *et al.* undertook a biological survey of the western Little Sandy Desert by helicopter, and touched on the northern end of the Carnarvon Range.

We independently visited the area in 1998. Members of the Western Australian Naturalists' Club (Photo 3), under the leadership of one of us (KHC), made extensive collections and recordings of flora and avifauna throughout the area including the nearby abandoned Blue Hill Pastoral Lease (Photo 4) in August 1999 and 2000 (see

Coate 1999). In August 2001 a LANDSCOPE Expedition (through the auspices of Department of Conservation and Land Management in association with The University of Western Australia Extension) under the leadership of botanist, Kevin Kenneally, also collected and recorded in the area. We were co-leaders on this expedition.

In the next two sections we present data on the plants and birds of the area.

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